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ABSTRACT

In 1981, a nationwide survey of gunsmithing professionals was conducted to provide information for the revision of Yavapai College's gunsmithing program. The survey was motivated by serious problems with the existing program, including high costs, low enrollment and completion rates, little instructional continuity, and disagreement within the college about curriculum design and program outcomes. A total of 224 professional gunsmiths were surveyed and asked to rate the importance of basic gunsmithing skills; indicate how much training should be lab and how much lecture; indicate how many hours a 2-year program should consist of and how many of these hours should be devoted to on-the-job training; provide salary information; and rate the importance of courses currently required in Yavapai's program and suggest additional courses. Results, based on a 42% response rate, indicated that: (1) lathe work, finishing, chamber and barrel work, and buffing were the most important basic skills; (2) 47.6% of the respondents felt that the proportion of class to lab time should be 20% to 80%; (3) 26.2% felt a 2-year program should consist of 2,000-2,999 hours of course work; and (4) the most important courses offered by the college were seen to be machine shop and gunsmithing practices. Based upon the findings a number of curriculum revisions were implemented and additional recruitment activities initiated. These efforts resulted in increases in enrollments and inquiries about the program. The questionnaire and detailed responses are appended. (HB)

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A NATIONAL CURRICULAR NEEDS ASSESSMENT FOR A UNIQUE COMMUNITY COLLEGE PROGRAM

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Abstract

Yavapai College offers one of the few Gunsmithing Programs west of the Mississippi. The program has been plagued with high costs, low enrollment, few completers, little instructional continuity, as well as disagreement among advisory committee members, instructors, students and administrators concerning curriculum design and program outcomes.

Against the above-mentioned background, the Dean of Career Education decided to undertake a nation-wide survey of gunsmithing professionals. The survey had a number of purposes. Among them were the following: to define entry level skills expected for employment eligibility, to determine entry level salaries, to gather feedback information on the existing curriculum, and to provide a basis for curriculum revision, if necessary.

From a total population of 244 gunsmithing professionals, 103 useable questionnaires were returned for a response rate of 42 percent. Survey results helped to define the job market and pointed to the need for curriculum revision. This revision was accomplished.

Promotion of the revised program was undertaken on a nation-wide basis. Responses have been overwhelming, with program capacity for the Fall of 1982 reached prior to the end of the Spring of 1982.

The positive response has caused a concern for reassessment of the promotion phase of our institutional marketing program. Emphasis in the 1982-83 year will be on assessing our products rather than promoting them.

VC 820 532

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Introduction

Yavapai College is a small community college serving both Yavapai and Coconino counties in Northern Arizona. The district enrolls more than 5500 students per semester, of which approximately 2500 attend the Prescott campus, 1000 attend the sister campus in the Verde Valley, 700 attend in extension locations throughout the rest of Yavapai county and 1600 attend in extension locations in Coconino county.

The Prescott campus offers typical community college programs, as well as some programs not found on many community college campuses, one of which is Gunsmithing. A two-year Associate of Applied Science (A.A.S.) degree in Gunsmithing, as well as a certificate in gunsmithing, have been offered since 1977. Normally, a student in the program would complete the certificate and then would enroll for additional courses required for the A.A.S. degree. Both programs are similar; a minimum number of eight hours beyond the certificate are required for the A.A.S. degree. These hours are physical education, English, and social and behavioral science courses. Both the degree and certificate gunsmithing programs will be referred to as one program in this paper.

The gunsmithing program at Yavapai College had a number of problems. First, the program has been highly capital intensive; an extensive investment in lathes, drill presses, bluing vats, band saws, grinders, etc. is required. Although some of this equipment may be used in the manufacturing program which the college offers, much of the equipment is unique to gunsmithing. Second, the program had not been able to attract and retain qualified faculty. Employing a single gunsmithing faculty member, while other support faculty taught more general subjects, such as welding, lathe operations, etc., had been difficult. Third, disagreement existed between the

gunsmithing faculty member, the college administration, and the gunsmithing advisory committee on a number of issues, such as emphasis in some courses and the ratio of lecture to laboratory courses. Fourth, the gunsmithing program had an extraordinarily well-qualified advisory committee. The committee was composed of some nationally renowned gunsmithing specialists who lived in the Prescott area. It was argued by some people that the advisory committee lacked the ability to identify with the needs of the gunsmithing generalist, the most likely employer of program completers. Fifth, against this tumultuous background, enrollments were low; the semester capacity of fifteen full-time students had never been reached. Sixth, program costs per student and costs per student credit hour were consequently high. Seventh, placement of completers was haphazard with unsubstantiated claims of employability being common.

Needs Assessment and Program Planning

In order to establish a basis for broader input to decisions that had to be made regarding the gunsmithing program, as well as to gather information concerning employment in the profession, the Dean of Career Education decided to undertake a nation-wide needs assessment of practicing gunsmiths. There had never been a clearly established mode or style for planning academic programs at Yavapai College. The style that did exist could be described as a combination of two of the thirteen styles described by Heydinger (1980B, pg.4): entrepreneurial (laissez faire), and curriculum committee. The needs assessment, one of the thirteen styles, was clearly seen as a major planning tool for the gunsmithing program. The gunsmithing program had never been oriented toward training students for local employment only; therefore, the

decision was made to sample nationally and to gather as much information as possible from general repair shops, as well as from specialty shops.

Most of the literature on needs assessment focuses on the discrepancy model (Lenning). A discrepancy is associated with the "...need or gap between 'what is' and 'what should be'" (Vlahos). It was possible to describe the current program situation at Yavapai College, and it had problems. It was desired to gain a better understanding of what the program should be in order for it to serve a useful purpose, and for its chances of survival to be maximized. The needs assessment developed for the gunsmithing program was intended to be a descriptive tool (Vlahos); its primary purpose was to describe the existing situation in the world of gunsmithing work, and hence, to provide a better understanding of how gunsmithing students should be prepared for that world of work.

It was also apparent that this project entailed more than a needs assessment. It really concerned the broader concept of program review, although Yavapai College had no formal or organized program review process. Many definitions of program review may be found in the literature, and the need for program review has been extensively debated (Seeley). However, the issues that needed to be addressed in the gunsmithing program were really consistent with three broad purposes posited by Seeley (1981, pg. 48): first, the need to gather information for program planning; second, the need for dealing with program improvement or modification and; third, the concern for program justification.

The project also involved some marketing considerations, based on decisions relative to program continuance that resulted from the needs assessment. Yavapai College had embarked upon a marketing project in the 1980-81 fiscal year. Although attempts were being made to develop a campus

marketing plan, no particular program had been singled out for specific marketing attention.

The Project

During the Fall of 1980, a nation-wide list of gunsmiths and gun manufacturers was prepared. The list was developed from references found in gunsmithing trade journals and from any other references forwarded through the advisory committee and the gunsmithing faculty. Although the list certainly did not include all businesses in the gunsmithing profession, it did represent an attempt to compile a comprehensive and representative sample of those businesses. Since the needs assessment was intended to produce descriptive, rather than inferrential statistics, no attempt was made to accurately define the total population or to develop a random sample from it. The list contained 244 names from 49 states and the District of Columbia. A cover letter introducing the project, a questionnaire, and a self-addressed, stamped return envelope were sent to all 244 names on the list in January of 1981 (see Appendix A for a copy of the questionnaire). The questionnaires were pre-coded with a unique identifier so that respondents who did not return questionnaires could be identified. A follow-up letter and another questionnaire were sent to those nonrespondents in late February. From the two mailouts, a total of 103 useable questionnaires were returned for a response rate of 42 percent.

The questionnaire was intended to gather a variety of information. One valuable piece of information concerned the importance respondents attached to basic gunsmithing skills (question 2). In addition, respondents were asked to rate the importance of each course in the curriculum (question 8). Along with the name and number of each course, a brief course description was also

provided for explanation. It was also important to gather information on total length of time in clock hours recommended for a two-year Gunsmithing Program, as well as a percentage breakdown between classroom and laboratory experiences (questions 3 and 4). In addition, it was important to know how much additional on-the-job training would be expected of program completers and what they could expect for a starting salary (questions 4, 5, 6, and 7). The questionnaire also gathered basic demographic information from respondents (question 1), and a provision was made for other comments on many of the questions, as well as at the end of the questionnaire. A number of respondents did provide additional comments.

Responses from useable questionnaires were key-entered into a sequential disk resident data set on a DEC-10 computer at Yavapai College. The data set was then accessible by the interactive statistics package, STATPACK (STP), developed at Western Michigan University. STP was used to produce bar graphs based on the percentage distribution of responses to each question. The bar graphs showed the actual number of responses to each alternative, as well as the respective percentage on each question. This use of percentages and bar graphs is consistent with classic descriptive statistics. Additional analysis was performed, by hand, on comments entered by many respondents. An attempt was made to group comments and tally them where appropriate.

After the surveying was complete, an analysis of the data was performed by the Institutional Research Office. Analysis involved developing descriptive statistics for the total sample of respondents on each question (frequency distributions), as well as cross-tabulations of the data on subsets of respondents. Cross-tabulations were important to determine if certain types of respondents answered some questions differently from other respondents. A report was written in Spring of 1981 and presented to the Dean

of Career Education (see Appendix B). The Dean of Career Education and the Institutional Researcher then presented the findings to the advisory committee and recommendations for program modifications were developed by that group during the Summer of 1981. Implementation of recommended modifications began during the 1981-82 academic year.

Findings and Recommendations

Over half of the respondents identified themselves as general gunsmiths (50.5 percent). Of the remaining respondents, a number of specialties were identified, as discussed in question 1. Responses from the general gunsmiths remained consistent with responses from all respondents except in one case, which is discussed below.

Responses to question 2 confirmed that some areas of program emphasis were consistent with what the respondents thought was important. For example, the program had emphasized buffing, bluing, stock making, and finishing. Some other skills ranked as very important, and of average importance were checkering, action alteration, fitting of sights and accessories, glassbedding, repair, lathe, mill and drill press. After discussion with the advisory committee and a new faculty member, employed prior to the Fall of 1981, curriculum revision was undertaken to emphasize the above-mentioned skill areas. Lab time was increased in four courses, with emphasis on increased lathe, milling and drill press operation. In the Fall of 1982, courses in engraving and checkering were offered as special topics. Enrollment was not sufficient for the checkering course to make. It is anticipated that courses in glassbedding and stock fitting will be offered next spring. Action alternation is currently considered too specialized for this curriculum.

Responses to question 3 have caused the lab - lecture relationship in the program to be reconsidered. It is apparent that the majority of respondents felt that more time should be spent in lab than in lecture. As a consequence, the curriculum has been modified to include more lab time.

The total amount of lab clock time required in the program is being increased, and responses to question 4 have served as a basis for the increase. The amount of clock time had been in the 1500-1999 hour range, with variation resulting from the individual's selection of courses and amount of time spent in labs. In the 1981-82 academic year the toal amount of lab time required in the program was increased to the 2000-2499 hour range.

Other curricular changes were initiated. New areas of the program were emphasized in existing or in new courses, some courses previously required were changed to electives, and some previous electives were no longer recommended as electives. For example, ITM 296, Technology and Man, is now an elective rather than a required course. Also, SBM 240, Small Business Management Problems and Procedures, and BSA 238, Business Law, are no longer electives.

An attempt will be made to employ an instructional associate for the 1983-84 academic year to supervise an open lab program so that increased lab time can be integrated into the program. It is hoped that the total number of lab clock hours in the program will eventually be in the 2500-2999 hour range.

The primary basis for major curriculum justification and/or revision came from responses to question 8 where respondents could react to a listing of actual course offerings. For example, students and the advisory committee felt that ITM 102, Drafting/Industrial Graphics, should not be required. Respondents confirmed a low interest in this type of course. Consequently, ITM 102 is no longer a required course. Conversely, students and the advisory

committee also felt that ITM 144, Machine Tool Technology, should not be required; however, respondents registered high interest in this course. This course remains required.

Some course have remained, as required, in the program even though they received low expressions of interest from respondents. Examples of such courses are ENG 135 and 136, Communication Skills and Report Writing, and BSA 233, Business Communications. The administration has mandated that these courses shall remain because they are viewed as providing necessary communication skills for today's professional businessman.

Questions 5, 6, and 7 have provided much needed information for recruitment and placement activities. Prior to the needs assessment, little actual information was available from employers regarding expected on-the-job training (OJT) or manner and amount of pay for beginning employees. Although the advisory committee was composed of some nationally renowned gunsmiths, they were highly specialized and did not employ any nonexperienced gunsmitns. Unsubstantiated claims abounded. Respondents indicated that quite a bit of OJT would be required, as shown in question 5. These responses have helped students understand that, even though they think they are well-qualified and experienced upon program completion, there will still be much to learn as they seek to establish themselves as professionals in the field.

The respondents indicated also that straight salary was paid to employees in about 40 percent of the cases. Income is often tied to commission and/or other forms of compensation, which in turn are often tied to experience and quality of work.

Responses to question 7 show clearly the expected salary range for program completers. The vast majority of respondents would expect to pay between $500 and $1250 per month. Although the range is sizeable, $750,

claims of immediate high salaries available to program completers were not substantiated.

Additional analysis was performed to determine if the responses from the general gunsmiths differed substantially from other respondents' responses. The only place where such a difference existed was on question 2, item 28, "Repair." General gunsmiths attached a higher importance to this skill than did all respondents. Since repair constitutes much of the general gunsmiths' work, their responses to this item were not unexpected.

In the fall of 1981, and continuing through the spring of 1982, a number of very brief ads were run in the following gunsmithing trade journals: The Shotgun News, The American Handgunner, Shooting Times, Western Outdoors and Guns Magazine. These ads simply identified the gunsmithing program at Yavapai College and stated that an information packet would be sent to any interested prospective students. The information packet contained a personalized cover letter from the gunsmithing instructor, a short history of the program, including the names of advisory committee members, an outline of the admission policy, course descriptions, requirements, a list and cost of tools required in the program, and some brochures on the community.

Prior to the end of the spring semester, over 100 inquiries had been received, as well as enrollment commitments in excess of the maximum limit of 15 students. For the first time in the history of the program, enrollment capacity was reached in the fall of 1982. Inquiries continue to be received. Serious consideration is being given to expanding program capacity, and steps in this direction may be taken in the 1983-84 academic year.

Epilogue

The reversal of the enrollment trends in the program has been dramatic

and has caused a reconsideration of promotion activities. Actually, the questions of program planning and evaluation have received increased attention. A number of activities in this project are consistent with those that are often referenced in descriptions of program planning and evaluation, as was discussed in the second section of this paper. The needs assessment, in fact, has been the important tool in recent gunsmithing program planning. It has served to accurately define the new student market and it has been used as a retrospective tool to assess previous educational offerings. Consistent with Heydinger's description, the needs assessment has served as an idea generator, and ". . . an antecedent to program planning" (1980A, pg. 99).

The needs assessment also has served as a marketing tool. Larkin states that a needs assessment is a first step concerning proposed new programs (1979). A needs assessment had never been undertaken for this program, and it provided the first market research for the program.

The needs assessment, however, did not provide total market research. As far as either a marketing or a program planning point of view is concerned, other kinds of assessment and follow-up research in this program are needed (Baratta, Larkin). For example, little definitive information is available concerning manpower needs, and Yavapai College is banking on a strong placement effort to assist gunsmithing completers in finding employment. Also, it will be important to follow-up on completers after they have secured employment in order to assess student outcomes and program goal accomplishment. In spite of acknowledged shortcomings, however, the needs assessment has helped provide a basis for improved program planning.

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APPENDIX A

QUESTIONNAIRE

1. My shop best fits in the category of

10
1. ____ General Gunsmithing
2. ____ Pistol Smithing
3. ____ Target Work
4. ____ Repair
5. ____ Other (specify) _____

2. Indicate the importance of the following basic skills using a scale of 3 = very important; 2 = average importance; 1 = little importance; 0 = no importance:

11 ____ Buffing
12 ____ Bluing
13 ____ Heat Treatment
14 ____ Chamber & Barrel Work
15 ____ Welding
16 ____ Stockmaking
17 ____ Finishing
18 ____ Checkering
19 ____ Soldering & Brazing
20 ____ Band Saw
21 ____ Disc Sander
22 ____ Belt Grinder
23 ____ Action Alteration
24 ____ Pistol & Revolver Work
25 ____ Fitting of Sights & Accessories
26 ____ Stock Repair & Alteration
27 ____ Glassbedding
28 ____ Repair
29 ____ Custom Metal Work
30 ____ Lathe
31 ____ Mill
32 ____ Drill Press
33 ____ Bench Grinder
34 ____ Other (specify):
____ _____
____ _____
____ _____

3. In a person's training, indicate with a check mark how much work you feel should be classroom; how much work should be lab:

	Classroom	Lab
1. ____	0%	100%
2. ____	20%	80%
3. ____	40%	60%
35 4. ____	60%	40%
5. ____	80%	20%
6. ____	100%	0%

4. Please indicate with a check mark the total number of hours you feel should be in a two-year college gunsmithing program:

36
1. ____ 0 - 499
2. ____ 500 - 999
3. ____ 1000 - 1499
4. ____ 1500 - 1999
5. ____ 2000 - 2499
6. ____ 2500 - 2999
7. ____ 3000 or more
8. ____ Other (specify) _____

5. If you were to hire one of our graduates, how much on-the-job training would you expect them to need in your shop?

37
1. _____ 0 - 499 hours
2. _____ 500 - 999 hours
3. _____ 1000 - 1499 hours
4. _____ 1500 - 1999 hours
5. _____ 2000 - 2499 hours
6. _____ 2500 or more hours

6. A beginning gunsmith would be paid in which manner in your shop?

38
1. _____ Salary
2. _____ Salary + Commission
3. _____ Commission
4. _____ Other (please state)

7. A graduate of our two-year program could expect initially to earn approximately how much per month?

39
1. _____ $ 0 - 499
2. _____ $ 500 - 749
3. _____ $ 750 - 999
4. _____ $1,000 - 1,249
5. _____ $1,250 - 1,499
6. _____ $1,500 or more

8. Following is a list of courses, with a brief description, required for the two-year degree. Please rate the courses as follows:

1 - Very important
2 - Important
3 - Average importance
4 - Of little importance
5 - Shouldn't be required

FRESHMAN YEAR, FALL SEMESTER

40 _____ ITM 162. GUNSMITH THEORY 1. (2) In this course the history, development, and construction of guns will be presented. Hand tools and bench tools and their use will be studied in detail. Two lecture.

41 _____ ITM 164 MACHINE SHOP PRACTICE 1. (2) This course is for skill development in machine shop work. Exercise and projects will involve layout work, use of measuring tools, drill press, engine lathe, and band saw work. Must be taken concurrently with ITM 165. Six lab.

42 _____ ITM 165. MACHINE SHOP PRACTICE II. (3) This course is for skill development in machine shop work. Must be taken concurrently with ITM 164. Nine lab.

43____ ITM 144. MACHINE TOOL TECHNOLOGY I. (3) Principles and operation of machine tools in the shaping of metals. Includes the use of layout and measuring tools, the operation of lathes and drill presses, including allied equipment and attachments. Two lecture; three lab.

44____ ITM 102. DRAFTING/INDUSTRIAL GRAPHICS. (4) Graphics techniques, procedures and knowledge used to describe shape and size of a product. Three lecture; three lab.

45____ MTH 137. TECHNICAL MATHEMATICS I. (3) This course is designed for the student enrolled in the Applied Science and Technology Division. Topics covered in this course are: fractions; decimals; basic algebraic operations; basic deometry; signed numbers. Three lecture.

FRESHMAN YEAR, SPRING SEMESTER

46____ ITM 172. GUNSMITH THEORY II. (2) In this course the custom making of gunstocks will be studied in detail. In addition, trigger assemblies and gun sights will be investigated in depth. Prerequisite: ITM 162. Two lecture.

47____ ITM 174. MACHINE SHOP PRACTICE III. (2) Practice in the set up and operation of surface grinders, universal cutter grinders, and tool and bench grinders. Operations such as surface grinding, form grinding, cutter sharpening, and cylindrical grinding will be performed on various projects. Must be taken concurrently with ITM 175. Six lab.

48____ ITM 175. MACHINE SHOP PRACTICE IV. (3) Practice in the setup and operation of milling machines. Common operations will be performed on a variety of projects or exercises. Must be taken concurrently with ITM 174. Nine lab.

49____ ITM 150. MACHINE TOOL TECHNOLOGY II. (3) Principles and operation of machine tools in the shaping of metals. Includes the set-up and operation of milling machines, shapers, and grinding machines including allied attachments. Two lecture; three lab.

50____ *ITM 110. METALLURGY. (3) Introduction to metals and to metal alloy systems. The metallic bond and structure of metals, fundamentals of heat treating operations and extractive processes. Applications in the metal industries. Two lecture; three lab.

51____ ENG 135. COMMUNICATION SKILLS. (3) A practical course in conversational English and the application of principles of speech to the actual problems of students in Technical Education. Three lecture.

52____ ENG 136. REPORT WRITING. (3) This course offers instruction and assignments in the aspects of technical communication which are basic to those kinds of writing that an employee would find in an occupation. Three lecture.

53____ BSA 233. BUSINESS COMMUNICATIONS. (3) Communication theory, verbal and nonverbal, written and oral. Effective letters relative to inquiry, complaint, sales, credit and collection, application and goodwill. Effective business reports in letter, memo, short and long form relative to types of business data. Prerequisites: English 131, or 135 and the equivalent of typing skill in OED 130 or permission of instructor. Three lecture.

*Or Courses in Science and Quantitative Studies

SOPHOMORE YEAR, FALL SEMESTER

54_____ ITM 296. TECHNOLOGY AND MAN. (3) A study of the inter-relationships of technology, industry, and man from historical, contemporary and futuristic perspectives. Three lecture.

55_____ ITM 262. GUNSMITHING THEORY III. (2) A comprehensive study of gun action and their repair, conversion of military guns, and the making of special gunsmithing tools. Two lecture.

56_____ ITM 264. GUNSMITHING PRACTICE I. (2) This is a skill development course in gunsmithing operations in the machine shop. Repair of actions, barrel work, and the making of special tools will be emphasized. Must be taken concurrently with ITM 265. Six lab.

57_____ ITM 265. GUNSMITH PRACTICE II. (3) In this course a student will have the opportunity to develop skills in various gunsmithing techniques with emphasis on rifle modification and stock work. Must be taken concurrently with ITM 264. Nine lab.

58_____ ITM. 242. MACHINE TOOL TECHNOLOGY III. (3) Planning and producing advanced machine shop projects including machine tool operations, heat treatment, and cutter grinding. Two lecture; three lab.

59_____ ITM 152. WELDING I. (4) A basic course covering the principles and practices of welding as applied in industry. The student will develop skill in oxygen-acetylene welding, metal arc welding and flame cutting as well as an introduction to gas shielded arc welding procedures. Additional study will include metallurgy of welding, safety, and fabrication techniques and weld testing procedures. Two lecture: six lab.

SOPHOMORE YEAR, SPRING SEMESTER

60_____ ITM 272. GUNSMITH THEORY IV. (2) In this course the student will study hand loading techniques, gun blueing and other finishes, and engraving techniques. Two lecture.

61_____ ITM 274. GUNSMITH PRACTICE III. (2) This course will give the student an opportunity to finish and blue gun parts, hand engrave, and use chasing tools. Six lab.

62_____ ITM 275. GUNSMITH PRACTICE IV. (3) In this course the student will work on hand loading techniques and reworking of cartridges. No actual propellants will be used; however, spent cases will be reprocessed. Nine lab.

63_____ ITM 142. MANUFACTURING PROCESSES. (3) Introduction to modern manufacturing methods; survey of hot and cold workings of metals, casting and molding processes, machining and finishing methods, and quality control. Laboratory work will consist of participating in a class project that will involve many of the processes studied. Two lecture: three lab.

64_____ ITM 244. TOOLING OPERATIONS. (3) Design, construction, and experimentation in toolmaking. Selection of tool steels and their heat treatment: techniques of toolmaking using machine tools and bench tools will be studies. Laboratory work will consist of individual projects. One lecture; five lab.

SOPHOMORE YEAR, SPRING SEMESTER, Cont'd.

63 ____ *SMB 240. SMALL BUSINESS MANAGEMENT PROBLEMS AND PROCEDURES. (1-11) This course is made up of three modules a semester dealing with in-depth practical approaches to small business problems and procedures. Students must register for all the modules taught in a given semester. Modules for possible inclusion in any semester are Small Business Insurance, Finance, Law, Income Tax, Accounting, Small Profit Planning, Personnel, Salesmanship, and Advertising. Each module will meet for three lecture hours each week for five weeks, and will carry one hour of credit. May be taken for S/U credit.

66 ____ BSA 238. BUSINESS LAW. (3) General principles of the law of contracts, negotiable instruments, agency bailment, property and title. Three lecture.

67 ____ ACC 121. OFFICE ACCOUNTING. (3) A survey of the basic concepts of accounting for petty cash, payroll, a personal service enterprise, merchandise, notes and interest, accrual, bank reconciliation, and preparation of financial statements. Designed for the secretarial-clerical-data recording student. Three lecture.

*Or courses in Social and Behavioral Sciences.

Please list any courses that should be added as requirements in your opinion:

_____

_____

_____

_____

_____

APPENDIX B

YAVAPAI COUNTY COMMUNITY COLLEGE DISTRICT

Gunsmith Survey Analysis

May 18, 1981

Frank Gose

Institutional Research
1100 East Sheldon Street
Prescott, AZ 86301

GUNSMITHING SURVEY
ANALYSIS

1. My shop best fits in the category of

Freq.	%	
52	50.5	General Gunsmithing
0	0.0	Pistol Smithing
7	6.8	Target Work
4	3.9	Repair
40	38.8	Other
103		

The forty respondents who checked "Other" indicated a number of specializations--some listed more than one. Those specialities that received counts of two or more are listed as follows: Custom Rifles (9), Manufacturing (5), Custom Work (14), Stockmaking (16), Bluing (2), Specialized Repairs (2), Repair Work (3), Custom Shotgun Stocks (2), Engraving (2), Hunting & Bench Rest Rifles (3), Restoration/Refinishing (2), Chambering (3), Rebarreling (2), Sporting Rifles (2), Retail Sales (2), Barrel Work (2), Special Shotgun Work (2), Prototype Designs (2), All Kinds (2).

2. Indicate the importance of the following basic skills using a scale of 3 = very important; 2 = average importance; 1 = little importance; 0 = no importance:

	Very Important		Average Importance		Of Little Importance		No Importance	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Buffing	67	65.0	21	20.4	8	7.8	7	6.8
Bluing	63	61.2	26	25.2	7	6.8	7	6.8
Heat Treatment	35	34.0	38	36.9	23	22.3	7	6.8
Chamber & Barrel Work	71	68.9	21	20.4	3	2.9	8	7.8
Welding	54	52.4	34	33.0	9	8.7	6	5.8
Stockmaking	64	62.1	29	28.2	6	5.8	4	3.9
Finishing	72	69.9	23	22.3	3	2.9	5	4.9

	Very Important		Average Importance		Of Little Importance		No Importance	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Checkering	46	44.7	32	31.1	16	15.5	9	8.7
Soldering & Brazing	51	49.5	43	41.7	5	4.9	4	3.9
Band Saw	8	7.8	49	47.6	35	34.0	11	10.7
Disc Sander	19	18.4	46	44.7	26	25.2	12	11.7
Belt Grinder	18	17.5	56	54.4	24	23.3	5	4.9
Action Alteration	41	39.8	42	40.8	13	12.6	7	6.8
Pistol & Revolver Work	52	50.5	28	27.2	10	9.7	13	12.6
Fitting of Sights & Accessories	64	62.1	32	31.1	4	3.9	3	2.9
Stock Repair & Alteration	48	46.6	43	41.7	8	7.8	4	3.9
Glassbedding	25	24.3	54	52.4	14	13.6	10	9.7
Repair	59	57.3	29	28.2	8	7.8	7	6.8
Custom Metal Work	56	54.4	31	30.1	10	9.7	6	5.8
Lathe	78	75.7	18	17.5	3	2.9	4	3.9
Mill	60	58.3	34	33.0	3	2.9	6	5.8
Drill Press	58	56.3	36	35.0	6	5.8	3	2.9
Bench Grinder	37	35.9	44	42.7	15	14.6	7	6.8
Other	29	28.2	5	4.9	1	1.0	68	66.0

Many respondents listed other basic skills. Those skills that were listed at least twice are as follows: Gunsmithing Tools (6), Hand Polishing (2), Rust-Bluing (2), Tool Grinding/Making (3), Design/Artistry/Esthetics (4), Surface Grinders (2).

3. In a person's training, indicate with a check mark how much work you feel should be classroom; how much work should be lab:

Freq.	%	Classroom	Lab
1	1.0	0%	100%
49	47.6	20%	80%
50	48.5	40%	60%
1	1.0	60%	40%
2	1.9	80%	20%
0	0.0	100%	0%
103			

4. Please indicate with a check mark the total number of hours you feel should be in a two-year college gunsmithing program:

Freq.	%	
5	4.9	no response
1	1.0	0 - 499
2	1.9	500 - 999
6	5.8	1000 - 1499
11	10.7	1500 - 1999
27	26.2	2000 - 2499
9	8.7	2500 - 2999
25	24.3	3000 or more
17	16.5	Other
103		

Those who indicated "Other," responded with:

The more, the better (2)
A 2-year program (1)
3-4 years at 10 hours per semester (1)
25 hour week lab (1)
40 hours per week - 4000 hours (1)
Average 2-year A.S. degree (1)
No opinion (7)
Cannot be a true gunsmith in a 2-year program (3)

5. If you were to hire one of our graduates, how much on-the-job training would you expect them to need in your shop?

Freq.	%	
17	16.5	no response
20	19.4	0 - 499
25	24.3	500 - 999
8	7.8	1000 - 1499
8	7.8	1500 - 1999
7	6.8	2000 - 2499
18	17.5	2500 or more
103		

6. A beginning gunsmith would be paid in which manner in your shop?

Freq.	%	
9	8.7	no response

Cont'd

6. Cont'd

Freq.	%	
43	41.7	Salary
20	19.4	Salary + Commission
21	20.4	Commission
10	9.7	Other
103		

Respondents indicating "Other" listed: Hourly (4), Percent on labor (2) Depends on Student (1), and Piecework.(1).

7. A graduate of our two-year program could expect initially to earn approximately how much per month?

Freq.	%	
12	11.7	no response
9	8.7	0 - 499
33	32.0	500 - 749
25	24.3	750 - 999
21	20.4	1000 - 1249
3	2.9	1250 - 1499
0	0.0	1500 or more
103		

8. Following is a list of courses, with a brief description, required for the two-year degree. Please rate the courses as follows:

	No Response		Very Important		Important		Average Importance		Of Little Importance		Shouldn't Be Required	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
ITM 162 Gunsmith Theory I	6	5.8	36	35.0	27	26.2	30	29.1	4	3.9		
ITM 164 Machine Shop Practice II	6	5.8	77	74.8	17	16.5	3	2.9				
ITM 165 Machine Shop Practice II	7	6.8	75	72.8	17	16.5	4	3.9				
ITM 144 Machine Tool Tech. I	4	3.9	62	60.2	21	20.4	15	14.6	1	1.0		
ITM 102 Drafting/ Industrial Graphics	3	2.9	13	12.6	21	20.4	41	39.8	23	22.3	2	1.9
MTH 137 Technical Mathematics I	5	4.9	22	21.4	23	22.3	33	32.0	17	16.5	3	2.9
ITM 172 Gunsmith Theory II	7	6.8	55	53.4	21	20.4	19	18.4	1	1.0		
ITM 174 Machine Shop Practice III	3	2.9	48	46.6	24	23.3	20	19.4	6	5.8	2	1.9
ITM 175 Machine Shop Practice IV	3	2.9	58	56.3	27	26.2	14	13.6	1	1.0		
ITM 150 Machine Tool Tech. II	3	2.9	51	49.5	31	30.1	16	15.5	1	1.0	1	1.0
ITM 110 Metallurgy	3	2.9	35	34.0	24	23.3	35	34.0	5	4.9	1	1.0

	No Response		Very Important		Important		Average Importance		Of Little Importance		Shouldn't Be Required	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
ENG 135 Communication Skills	3	2.9	12	11.7	27	26.2	36	35.0	18	17.5	7	6.8
ENG 136 Report Writing	3	2.9	8	7.8	16	15.5	44	42.7	27	26.2	5	4.9
BSA 233 Business Communications	4	3.9	17	16.5	24	23.3	41	39.8	13	12.6	4	3.9
ITM 296 Technology & Man	10	9.7	5	4.9	2	1.9	19	18.4	46	44.7	21	20.4
ITM 262 Gunsmithing Theory III	10	9.7	45	43.7	29	28.2	19	18.4				
ITM 264 Gunsmithing Practice I	10	9.7	70	68.0	14	13.6	9	8.7				
ITM 265 Gunsmithing Practice II	10	9.7	58	56.3	25	24.3	10	9.7				
ITM 242 Machine Tool Tech. III	10	9.7	38	36.9	28	27.2	20	19.4	4	3.9	3	2.9
ITM 152 Welding I	9	8.7	47	45.6	30	29.1	16	15.5	1	1.0		
ITM 272 Gunsmithing Theory IV	10	9.7	35	34.0	33	32.0	21	20.4	4	3.9		
ITM 274 Gunsmithing Practice III	10	9.7	42	40.8	34	33.0	15	14.6	2	1.9		
ITM 275 Gunsmithing Practice IV	9	8.7	19	18.4	21	20.4	34	33.0	19	18.4	1	1.0
ITM 142 Manufacturing Processes	9	8.7	23	22.3	30	29.1	29	28.2	9	8.7	3	2.9

	No Response		Very Important		Important		Average Importance		Of Little Importance		Shouldn't Be Required	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
ITM 244 Tooling Operations	9	8.7	39	37.9	26	25.2	22	21.4	6	5.8	1	1.0
SMB 240 Small Business Management Problems & Procedures	4	3.9	35	34.0	25	24.3	30	29.1	7	6.8	2	1.9
BSA 238 Business Law	5	4.9	22	21.4	23	22.3	31	30.1	16	15.5	6	5.8
ACC 121 Office Accounting	5	4.9	24	23.3	26	25.2	32	31.1	12	11.7	4	3.9

Please list any courses that should be added as requirements in your opinion:

Respondents suggested requirements as well as required courses. Listed below are those indicated two or more times.

Repair Work (8)
Bluing (5)
Customer Service/P.R. (3)
Hand Tool Practice (2)
Stockmaking Aspects - double time (5)
Spring Making (2)
Basics on running a small shop & surviving (2)
Grooming/Personality (2)
Types of Rifles (4)
Speed of Work without hurting Quality (2)
Types of Shotguns & Handguns (3)
Machine Shop/Welding (2)
Take a "Mechanical Abilities" test (2)
More production work/less theory (5)
Basic Ballistics (4)
Safety of Firearms (2)
Current Gun Models (2)
Hand Finishing of Metal (2)
Psychology in dealing with customers (2)
Shotgun Work (4)
Telescopic Sights/Mounts (2)
High-quality Workmanship (2)
Working with files (3)
On-the-Job Training (2)
Hand-finishing of Metal (2)

SUMMARY

Additional analysis was undertaken to study the responses of certain respondents. The responses of the General Gunsmithing respondents, as defined in question 1, were compared with the responses of all respondents to see if differences existed. No substantial differences existed except on question 2, item 28, "Repair." As might be expected, the General Gunsmithing respondents attached a higher importance rating to repair work than did all respondents. As a group, over 94% of the General Gunsmithing respondents indicated that this skill was either "Very Important" or of "Average Importance." Also, over 71% of this group indicated the skill was "Very Important."

Responses to most of the questions need to be studied and reviewed by curriculum developers. Comments from this office, other than what has been written above, would be ill-advised. It can be said, however, that most of the respondents indicated that lab-type experiences should dominate the curriculum. Responses to questions 3 and 8 confirm this assertion.

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